

Amendments to the Claims

1-23. (Canceled)

24. (Currently amended) ~~An apparatus as recited in claim 22;~~ An apparatus for reproducing original contents data from watermarked contents data generated by (1) converting a specified parameter of at least one segment of the original contents data in response to parameter information and map data to generate second contents data, the segment corresponding to a specified pixel, the parameter information designating the specified parameter which affects reproduction of the original contents data, the map data designating a position of the specified pixel, and (2) embedding the parameter information and the map data into the second contents data as watermark information, the apparatus comprising:

parameter detecting means for detecting the parameter information and the map data from the watermarked contents data; and

parameter inversely converting means for inversely converting the specified parameter of at least one segment of the watermarked contents data in response to the parameter information and the map data detected by the parameter detecting means to reproduce the original contents data, wherein the segment of the watermarked contents data corresponds to the specified pixel whose position is designated by the map information;

wherein the watermarked contents data have been generated by converting a specified parameter of segments of the original contents data which correspond to specified pixels at watermark-embedded positions, and the parameter information includes a parameter value indicative of a ratio of the conversion of the specified parameter,

wherein the parameter detecting means comprises pattern generating means for generating bits representing a predetermined bit pattern, operation means for selecting specified bits among bits in the watermarked contents data, for repetitively changing the currently-selected specified bits from ones to others, and for executing given logical operation between the predetermined bit pattern and a bit pattern represented by the currently-selected specified bits, embedding-position detecting means for deciding whether

or not a result of the given logical operation is equal to a specified bit pattern, and for, when the result of the given logical operation is equal to the specified bit pattern, deciding that the currently-selected specified bits correspond to a watermark-embedded position, and parameter-value detecting means for detecting the parameter value in the detected parameter information,

wherein the parameter inversely converting means comprises an inverse converter for, in response to the parameter value detected by the parameter-value detecting means, inversely converting the specified parameter of the segments of the watermarked contents data which correspond to the specified pixels at the watermark-embedded positions decided by the embedding-position detecting means.

25. (Previously presented) An apparatus as recited in claim 24, wherein the predetermined bit pattern and the specified bit pattern remain unchanged when being rotated through one of 90, 180, and 270 degrees.

26. (Canceled)

27. (Currently amended) ~~A recording medium as recited in claim 26;~~ A recording medium for storing watermarked contents data generated by (1) converting a specified parameter of at least one segment of original contents data in response to parameter information and map data to generate second contents data, the segment corresponding to a specified pixel, the parameter information designating the specified parameter which affects reproduction of the original contents data, the map data designating a position of the specified pixel, and (2) embedding the parameter information and the map data into the second contents data as watermark information;

wherein a specified parameter of segments of the original contents data which correspond to specified pixels at watermark-embedded positions is converted from an original value, and the parameter information includes a parameter value indicative of a rate of the conversion of the specified parameter,

wherein the watermarked contents data are produced by generating bits

representing a predetermined bit pattern, detecting bits in the contents data as specified bits which correspond to the specified pixels at the watermark-embedded positions, calculating a desired bit pattern represented by the specified bits in response to the predetermined bit pattern and a specified bit pattern, changing the specified bits to represent the desired bit pattern to convert the contents data into bit-pattern-added contents data, and embedding the parameter information into the bit-pattern-added contents data as watermark information.

28-37. (Canceled)